Butanol for sustainable aviation

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Butanol for sustainable aviation

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Abstract:
Butanol is a four-carbon alcohol suited for the production of road and jet fuel. The ATJ-SPK (alcohol-to-jet synthetic paraffinic kerosene) pathway aims to obtain paraffinic kerosene from C2-C4 alcohols. The ASTM already approved the pathway for iso-butanol and ethanol with a blending certification of up to 30% and 50%, respectively. ABE fermentation would be the classical choice for bio-based butanol production, but high glucose requirements create competition with food production and raise concerns over sustainable land use. GreenLogic is a project recently initiated at DTU PROSYS to investigate butanol production from municipal waste streams and concentrated industrial effluents to counter such concerns. In this talk, we will highlight some of the challenges and opportunities that butanol is facing on a path to more sustainable aviation.